WinLink™ 1000 - Release 1.9.30
Release Notes

1 General

WinLink 1000 Release 1.9.30 is a General Availability release for WinLink 1000 radios. The information on this release note includes all the changes from previous 1.9 GA release.

Contact RADWIN Technical Support at support@radwin.com for any issue related with these release notes.

2 Release Components

	Component Name	Description
1.	Firmware	• ODU: build b1845 • IDU: o WL1000-IDU-T1, WL1000-IDU-E1, WL1000-IDU-2T1, WL1000-IDU-2E1, WL1000-IDU-2E1-AL, WL1000-IDU-R-T1, WL1000-IDU-R-E1: build b771 o RW-72XX-2000: build b3700 o RW-71XX-2000: build b3705 o WL1000-IDU-EO: build 1025
2.	RADWIN Manager	Release 8.5, build 8525. The RADWIN Manager includes a Software Upgrade Packages applicable to all RADWIN 2000 and WinLink 1000 radios.
3.	MIB Files	Updated MIB files for releases 2.5 and 1.9.30 supporting RADWIN 2000 and WinLink 1000 products (refer to the MIB Reference appendix in the User Manual).
4.	Link Budget Calculator	Build 7580. Supports both WinLink 1000 and RADWIN 2000 products. New capabilities: • Minimum calculated distance of 0.02Km • Link capacity calculation is based on new IDU portfolio (RW-71XX-2000 and RW-72XX-2000) including 3xE1/T1 trunks • Automatic distance calculation via Coordinates tab
5.	Installation CD	CD content: • RADWIN Manager installation • Quick Installation Guide • User manual: RADWIN 2000 (English-2.5, Russian-2.4.50), WinLink 1000 (English-1.9.30, Russian-1.9) • Link Budget Calculator (LBC) for RADWIN 2000 and WinLink 1000 • BDU material (User Manual English-6.2, JRE link, install JRE) The CD ships with all ODUs (RADWIN 2000, WinLink 1000), IDU-Cs (RW-72XX-2000), IDU-Es (RW-71XX-2000) and BDU.
6.	New products	See following section

3 Supported Products

3.1 ODU

3.1.1 New Radios:

All new products use hardware version 8, except **WL1000-ODU-CL/F49/HP/EXT**, which uses hardware version 9.

	Product Name	Catalog Numbers	Description
1.	WL1000-ODU-VS/F58/IDA/EXT WL1000-ODU-VS/F58/IDA/INT	AT0093600 AT0093590	Outdoor unit supporting HSS for external and integrated antennas, supporting 5.8GHz WPC band, providing asymmetric throughput 2/5 Mbps, max Tx power 16dBm, supporting 5,10 and 20 MHz channel BW
2.	WL1000-ODU-HE/F54/HP/CMB/EXT WL1000-ODU-HE/F54/HP/CMB/INT	AT0093620 AT0093610	Outdoor unit supporting HSS for integrated and external antenna operating in 5.4GHz universal (HP) band, max Tx power 23dBm, supporting 5, 10, 20MHz channel BW. Can be configured, where regulation allows, to: 5.8GHz FCC, 5.8GHz India WPC, 5.3GHz universal (HP), 5.9GHz universal (HP)
3.	WL1000-ODU-CL/F58/IDA/EXT/PoE WL1000-ODU-CL/F58/IDA/INT/PoE	AT0098170 AT0098160	Outdoor unit supporting HSS for integrated and external antenna, supporting 5.8GHz Indian WPC regulation, max Tx power 16dBm, supporting 5,10,20 MHz channel BW
4.	WL1000-ODU-CL/F24/FCC/EXT/PoE WL1000-ODU-CL/F24/FCC/INT/PoE	AT0098190 AT0098180	Outdoor unit supporting HSS for integrated and external antenna, supporting 2.4GHz FCC/IC (factory default) and 2.4GHz universal, max Tx power 18dBm, supporting 5,10,20 MHz channel BW
5.	WL1000-ODU-CL/F49/HP/EXT	AT0100120	Outdoor unit supporting HSS for external antenna operating in 4.9GHz universal band (factory default), 5.3GHz universal, 5.4GHz universal, 5.8GHz FCC, 5.9GHz universal, max Tx power 16dBm, supporting 5, 10 and 20MHz channel BW

3.1.2 Multi Bands Radios

A License Key to enable supported bands can be obtained at http://www.radwin.com/updates/lk-radwin.htm following customer's online declaration of compliance with local regulations. Use the License Key Generator to check whether the ODU supports your required band according to the ODU serial number.

	Product Name	6.0 GHz Universal	5.9 GHz Universal	5.8 GHz FCC/IC	5.8 GHz WPC India	5.8 GHz ETSI	5.8 GHz Universal	5.7 GHz Universal	5.4 GHz FCC/IC	5.4 GHz ETSI	5.4 GHz Universal	5.3 GHz FCC/IC	5.3 GHz ETSI	5.3 GHz Universal	4.9 GHz FCC	4.9 GHz Universal	2.4 GHz FCC/IC	2.4 GHz ETSI	2.4 GHz Universal	2.3 GHz Universal
ODU-CL	WL1000-ODU-CL/F24/FCC/EXT/PoE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓*	-	✓	-
	WL1000-ODU-CL/F24/FCC/INT/PoE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓*	-	✓	-
	WL1000-ODU-CL/F49/HP/EXT	-	✓	✓	✓	-	-	-	-	-	✓	-	-	✓	-	✓*	-	-	-	-
	WL1000-ODU-CL/F49/HP/INT	-	✓	✓	✓	-	-	-	-	-	✓	-	-	✓	-	✓*	-	-	-	-
	WL1000-ODU-CL/F58/IDA/EXT/PoE	-	✓	+	✓*	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-
	WL1000-ODU-CL/F58/IDA/INT/PoE	-	✓	+	✓*	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-
ODU-HE	WL1000-ODU-HE/F49/FCC/EXT	-	-	-	-	-	-	-	-	-	-	-	-	-	✓*	+	-	-	-	-
	WL1000-ODU-HE/F49/FCC/INT	-	-	-	-	-	-	-	-	-	-	-	-	-	✓*	+	-	-	-	-
	WL1000-ODU-HE/F54/HP/CMB/EXT	-	✓	✓	✓	-	-	-	-	-	✓*	-	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F54/HP/CMB/INT	-	✓	✓	✓	-	-	-	-	-	✓*	-	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F54/ETSI/INT	-	-	-	-	✓	+	-	-	✓*	+	-	-	+	-	-	-	-	-	-
	WL1000-ODU-HE/F54/ETSI-LG/EXT	-	-	-	-	-	-	-	-	✓*	+	-	-	-	-	-	-	-	-	-
	WL1000-ODU-HE/F54/IC/CMB/EXT	-	-	-	-	-	-	-	✓*	-	✓	✓	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F54/IC/CMB/INT	-	-	-	-	-	-	-	✓*	-	✓	✓	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F54/FCC/CMB/EXT	-	-	-	-	-	-	-	✓*	-	✓	✓	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F54/FCC/CMB/INT	-	-	-	-	-	-	-	✓*	-	✓	✓	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F58/FCC/CMB/EXT	-	✓	✓*	✓	-	-	-	-	-	✓	-	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F58/FCC/CMB/INT	-	✓	✓*	✓	-	-	-	-	-	✓	-	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F58/IDA/CMB/EXT	-	✓	+	✓*	-	-	-	-	-	✓	-	-	✓	-	-	-	-	-	-
	WL1000-ODU-HE/F58/IDA/CMB/INT	-	✓	+	✓*	-	-	-	-	-	✓	-	-	✓	-	-	-	-	-	-
ODU	WL1000-ODU/F54/ETSI/EXT	-	-	-	-	✓	+	-	-	✓*	+	-	-	+	-	-	-	-	-	-
	WL1000-ODU/F54/ETSI/INT	-	-	-	-	✓	+	-	-	✓*	+	-	-	+	-	-	-	-	-	-
	WL1000-ODU/F54/ETSI-LG/EXT	-	-	-	-	-	-	-	-	✓*	+	-	-	-	-	-	-	-	-	-
	WL1000-ODU/F58/FCC/EXT	-	-	✓*	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
	WL1000-ODU/F58/FCC/INT	-	-	✓*	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
U-	WL1000-ODU/F54/ETSI/INT/PoE	-	-	-	-	✓	+	-	-	✓*	+	-	-	+	-	-	-	-	-	-

	Product Name	6.0 GHz Universal	5.9 GHz Universal	5.8 GHz FCC/IC	5.8 GHz WPC India	5.8 GHz ETSI	5.8 GHz Universal	5.7 GHz Universal	5.4 GHz FCC/IC	5.4 GHz ETSI	5.4 GHz Universal	5.3 GHz FCC/IC	5.3 GHz ETSI	5.3 GHz Universal	4.9 GHz FCC	4.9 GHz Universal	2.4 GHz FCC/IC	2.4 GHz ETSI	2.4 GHz Universal	2.3 GHz Universal
	WL1000-ODU/F54/ETSI-LG/EXT/PoE	-	-	-	-	-	-	-	-	✓*	+	-	-	-	-	-	-	-	-	-
ODU-VS	WL1000-ODU-VS/F24/FCC/CMB/EXT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓*	-	✓	-
	WL1000-ODU-VS/F24/FCC/CMB/INT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓*	-	✓	-
	WL1000-ODU-VS/F54/ETSI/CMB/EXT	-	-	-	-	✓	+	-	-	✓*	+	-	-	+	-	-	-	-	-	-
	WL1000-ODU-VS/F54/ETSI/CMB/INT	-	-	-	-	✓	+	-	-	✓*	+	-	-	+	-	-	-	-	-	-
	WL1000-ODU-VS/F58/FCC/CMB/EXT	-	✓	✓*	✓	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-
	WL1000-ODU-VS/F58/FCC/CMB/INT	-	✓	✓*	✓	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-
	WL1000-ODU-VS/F58/IDA/EXT	-	✓	+	✓*	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-
	WL1000-ODU-VS/F58/IDA/INT	-	✓	+	✓*	-	-	-	-	-	✓	-	-	✓	-	✓	-	-	-	-

Legend:

✓ Enabled band * Factory default band
+ Band supported and disabled - Band not supported

3.2 IDU

3.2.1 New Indoor units:

The new IDU-E units support both RADWIN 2000 and WinLink 1000 radios. All new products use hardware version 9.

	Product Name / Catalog Number	Description
1.	RW-7102-2000	IDU-E with 2 E1/T1 ports, 2 Ethernet 10/100baseT ports, and external alarms interfaces, with wide range DC feeding. Supporting VLAN capabilities and independent clock per TDM port, Tx and Rx.
2.	RW-7100-2000	IDU-E with 2 Ethernet 10/100baseT port, with wide range DC feeding. Supporting VLAN capabilities.

3.2.2 Supported Indoor units:

	Product Name / Catalog Number	Description
1.	RW-7216-2000	IDU-C with 16 TDM ports, 2 Ethernet interfaces and SFP port
2.	RW-7208-2000	IDU-C with 8 TDM ports, 2 Ethernet interfaces and SFP port
3.	RW-7204-2000	IDU-C with 4 TDM ports, 2 Ethernet interfaces and SFP port
4.	RW-7200-2000	IDU-C with 2 Ethernet interfaces and SFP port
5.	RW-7102-2000	IDU-E with 2 TDM ports and 2 Ethernet interfaces
6.	RW-7100-2000	IDU-E with 2 Ethernet interfaces

3.3 New Accessories:

	Product Name / Catalog Number	Description
1.	RW-9924-001X	• Outdoor GPS-based Sync Unit (GSU) for inter-site synchronization, including Antenna, HSS Cable and PoE device • Supported by RADWIN Manager • Supports site cascading mode (normal and shifted phase) • Supports GSU redundancy
2.	RW-9921-0069	• Outdoor DC PoE with wide Range DC feed -20 to -60 VDC • Outdoor case (for outdoor mounting, IP67, -35°C - 60°C) • Supports both RADWIN 2000 and WinLink 1000 radios

3.4 New Antennas:

	Product Name	Catalog Numbers	Description
1.	ANT-F2X-24/grid	AT0095700	Grid antenna, gain 24dBi, 2.3-2.9 GHz frequency range

4 Modified Products

	Product Name	Catalog Numbers	Description
1.	WL1000-ODU/F54/HP/INT WL1000-ODU/F54/HP/EXT WL1000-ODU/F54/HP/INT/PoE WL1000-ODU/F54/HP/EXT/PoE WL1000-ODU-HE/F54/HP/INT WL1000-ODU-HE/F54/HP/EXT	AT0052420 AT0054420 AT006310X AT006298X AT0064950 AT0064940	The frequency band was changed under 10MHz channel BW from: 5.475-5720GHz to: 5.470-5725GHz and under 20MHz channel BW from: 5.475-5720GHz to: 5.465-5730GHz.
2.	WL1000-ODU-HE/F27/HP/EXT	AT0089990	The Max Tx power was increased from 23dBm to 24dBm.
3.	WL1000-ODU/F54/ETSI/EXT WL1000-ODU/F54/ETSI/INT WL1000-ODU/F54/ETSI/INT/PoE WL1000-ODU-HE/F54/ETSI/INT WL1000-ODU-VS/F54/ETSI/CMB/EXT WL1000-ODU-VS/F54/ETSI/CMB/INT WL1000-ODU-HE/F54/FCC/CMB/INT WL1000-ODU-HE/F54/IC/CMB/INT WL1000-ODU-VS/F54/ETSI/CMB/INT WL1000-ODU-VS/F54/ETSI/CMB/EXT	AT0049390 AT0049370 AT006308X AT0064910 AT0089960 AT0089950 AT0077830 AT0077850 AT0089950 AT0089960	When ODU unit is set to F54 Universal (HP) band, the Max Tx Power was increased from 8dBm to 14dBm
4.	WL1000-ODU/F53/ETSI/EXT WL1000-ODU/F58/ETSI/EXT WL1000-ODU/F58/ETSI/INT WL1000-ODU-HE/F58/ETSI/EXT WL1000-ODU-HE/F58/ETSI/INT	AT0056520 AT0077800 AT0077810 AT0077860 AT0077870	Max Link Rate in the following products was increased from 48Mbps to 54Mbps. Max Link capacity: 21Mbps in RFP 'A' and 22Mbps in RFP 'B' @ 20MHz channel BW
5.	WL1000-ODU/F54/ETSI/EXT WL1000-ODU/F54/ETSI/INT WL1000-ODU-VS/F54/ETSI/CMB/EXT WL1000-ODU-VS/F54/ETSI/CMB/INT WL1000-ACCESS-PRO/F54/ETSI/EXT WL1000-ACCESS-PRO/F54/ETSI/INT WL1000-ODU/F54/ETSI/INT/PoE WL1000-ODU-HE/F54/ETSI/INT	AT0049390 AT0049370 AT0089960 AT0089950 AT009809X AT009808X AT006308X AT0064910	When ODU unit is set to F58 ETSI band the Max Link Rate in the following products was increased from 48Mbps to 54Mbps. Max Link capacity: 21 Mbps in RFP 'A' and 22Mbps in RFP 'B' @ 20MHz channel BW
6.	WL1000-ODU/F58/FCC/EXT WL1000-ODU/F58/FCC/INT	AT0041190 AT0040580	Add F57 Universal (HP) Band to the following products in the frequency range of 5.690 – 5.880 GHz. The Band is invisible to the user and can be activated via License Keys that can be obtained at RADWIN's web site: http://www.radwin.com/updates/lk-radwin.htm

	Product Name	Catalog Numbers	Description
7.	WL1000-ODU/F54/ETSI/EXT WL1000-ODU/F54/ETSI/INT WL1000-ODU/F54/ETSI/INT/PoE WL1000-ODU-HE/F54/ETSI/INT WL1000-ODU-VS/F54/ETSI/CMB/EXT WL1000-ODU-VS/F54/ETSI/CMB/INT	AT0049390 AT0049370 AT006308X AT0064910 AT0089960 AT0089950	All non ETSI bands in the following products from HW revision 7 and above switched to invisible and can be activated via License Key that can be obtained at RADWIN's web site: http://www.radwin.com/updates/lk-radwin.htm
8.	WL1000-ODU-CL/F49/HP/INT WL1000-ODU-CL/F49/HP/EXT WL1000-ODU/F58/FCC/EXT/PoE WL1000-ODU/F58/FCC/INT/PoE WL1000-ODU/F54/HP/EXT/PoE WL1000-ODU/F54/HP/INT/PoE WL1000-ODU/F53/HP/EXT/PoE WL1000-ODU/F53/HP/INT/PoE WL1000-ODU-HE/F59/HP/EXT WL1000-ODU-HE/F59/HP/INT WL1000-ODU-HE/F54/HP/CMB/INT WL1000-ODU-HE/F54/HP/CMB/EXT WL1000-ODU/F54/ETSI/EXT WL1000-ODU/F54/ETSI/INT	AT0085320 AT0100120 AT006300X AT006299X AT006298X AT006310X AT006305X AT006307X AT0063550 AT0063560 AT0093610 AT0093620 AT0049390 AT0049370	ODU hardware revision was changed from 8 to 9, due to HW update
9.	WL1000-ODU-HE/F54/ETSI-LG/EXT WL1000-ODU/F54/ETSI-LG/EXT WL1000-ODU/F54/ETSI-LG/EXT/PoE	AT0064920 AT0054910 AT006309X	Add Band F54 Universal (HP) to the following products that can be activated via License Key that can be obtained at RADWIN's web site: http://www.radwin.com/updates/lk-radwin.htm
10.	WL1000-ODU-HE/F49/FCC/INT WL1000-ODU-HE/F49/FCC/EXT	AT0082360 AT0064900	Add Band F49 Universal (HP) to the following products and Support 5MHz Channel BW in both Bands F49 Universal and FCC.
11.	WL1000-ACCESS-PRO/F58/IDA/EXT WL1000-ACCESS-PRO/F58/IDA/INT WL1000-ODU-CL/F58/IDA/EXT/PoE WL1000-ODU-CL/F58/IDA/INT/PoE WL1000-ODU-HE/F58/IDA/CMB/EXT WL1000-ODU-HE/F58/IDA/CMB/INT WL1000-ODU-VS/F58/IDA/EXT WL1000-ODU-VS/F58/IDA/INT	AT009824X AT009928X AT0098170 AT0098160 AT0075830 AT0075840 AT0093600 AT0093590	Disable Band F58 FCC. The Band can be activated via License Key that can be obtained at RADWIN's web site: http://www.radwin.com/updates/lk-radwin.htm
12.	WL1000-ODU-HE/F49/HP/EXT WL1000-ODU-CL/F49/HP/INT	AT0062390 AT0085320	Frequency Band was changed from 4.940 – 4.990 GHz to 4.940 – 5.010 GHz
13.	WL1000-ODU-CL/F58/IDA/EXT/PoE WL1000-ODU-CL/F58/IDA/INT/PoE WL1000-ODU-VS/F58/FCC/CMB/EXT WL1000-ODU-VS/F58/FCC/CMB/INT WL1000-ODU-VS/F58/IDA/EXT WL1000-ODU-VS/F58/IDA/INT	AT0098170 AT0098160 AT0089940 AT0089930 AT0093600 AT0093590	Frequency Band of Band F49 Universal (HP) in these products was changed from 4.940 – 4.990 GHz to 4.940 – 5.010 GHz

	Product Name	Catalog Numbers	Description
14.	WL1000-ODU/F54/ETSI/INT WL1000-ODU/F54/ETSI/INT/PoE WL1000-ODU-HE/F54/ETSI/INT WL1000-ODU-VS/F54/ETSI/CMB/INT WL1000-ODU/F54/ETSI/EXT WL1000-ODU-VS/F54/ETSI/CMB/EXT	AT0049370 AT006308X AT0064910 AT0089950 AT0049390 AT0089960	Band F58 Universal (HP) in these products supports 10MHz Channel BW
15.	ANT-F5X-22/FP ANT-F5X-28/FP	AT0050800 AT0063990	Antenna Frequency range was changed from 5.15 – 6.0GHz to 5.15 – 6.02GHz

5 New Features

	Feature	Description
1.	VLAN functionality	• Supported by WinLink 1000 radios with software upgrade to release 1.9.30, operating with IDU-C (RW-72XX-2000) and new IDU-E (RW-71XX-2000). • Supports various Ingress and Egress VLAN configuration options per IDU LAN port. • When using VLAN ID for management traffic separation, be aware how you configure the system to prevent conflicts.
2.	Independent Clock per TDM Trunk	• In the new IDU-E products the TDM clock recovery is done per TDM trunk separately. • This is useful in scenarios where the RADWIN backhaul Link is shared by various networks (for example, 2G and 3G, or several operators sharing sites), and each network has its own independent clock.
3.	Ring protection and Ethernet 1+1	• RADWIN's Ethernet Ring Protection solution ensures Loops free. • The Ethernet service restoration time depends on the number of hops in the ring. With 4 hops the Ethernet service is restored in less than 50 ms. • 1+1 Ethernet is a ring with two nodes.
4.	Telnet Disable / Enable	• The user can disable the Telnet management interface via the RADWIN Manager
5.	Max Frame Size	• Max supported frame size by WinLink 1000 was increased from 1,800 Bytes to 2,047 Bytes with software upgrade to release 1.9.30
6.	RADWIN Manager Online help	• New RADWIN Manager contextual online help (Press F1)
7.	Scheduled Software Upgrade	• The user can schedule the date and time that the software upgrade for the required units in the network will take effect.
8.	ODU reset options after software upgrade	• The user has number of options to define if ODUs of a specific link or all ODUs in the in a list that intend to be upgraded, will be reset or not after successful software upgrade.

6 Compatibility

	Component Name	Description
1.	Link firmware	With Ethernet only service release 1.9.30 is: • Fully compatible with releases 1.750, 1.770, 1.790, 1.795, 1.8 and 1.9. "Software upgrade recommended" is indicated. • Fully compatible with release 1.630 (for WL1000-ACCESS products). "Software upgrade recommended" is indicated. • Partially compatible with releases 1.62X ("Software upgrade required" is indicated when using HSS mixed mode). Both sides of the link should be upgraded to release 1.9.30 in the following cases: • For operation with TDM services with releases before 1.8 • For operation in bands 5.3 FCC, 5.4 ETSI and 5.4 IC with releases before 1.790. • For operation in band 5.4 ETSI with releases 1.790 and 1.795, software upgrade is highly recommended due to regulation change. • For operation with equipment shipped with releases 1.5XX or earlier.

	Component Name	Description
2.	Software Upgrade	The recommended procedure for software upgrade of WinLink 1000 to release 1.9.30 is as follows: 1. Upgrade the RADWIN Manager application. 2. Using the Software Upgrade Utility, load the new release to the WinLink 1000 on both sides of the link. Ensure that the option to reset both sides of the link is checked. Notes: 1. Software upgrade for release 1.9.30 should be done only from releases 1.6xx and above. 2. Software upgrade from releases prior to 1.6xx should be done in two steps: a) Upgrade the unit to version 1.7.50 (need to contact customer support for software upgrade tool) b) Upgrade from 1.7.50 to 1.9.30 (using RADWIN Manager) 3. When upgrade is performed to one of the bands that was changed, a frequency validation is performed and if no valid channel was found all channels are opened.
3.	RADWIN Manager	• RADWIN Manager version 8.5 is compatible with any RADWIN 2000 release and with WinLink 1000 releases above 1.500 - 1.795 WinLink 1000 Manager can be installed in parallel to the RADWIN Manager to support additional WinLink 1000 versions. • The RADWIN Manager in version 8.5 contains the user manual of WinLink 1000. • There is an indication for "newer release is available" when connecting to WinLink 1000 with release 1.790 or higher.
4.	IDU compatibility	• WL1000-IDU-2E1-AL can be used with ODU under release 1.520 and higher. • WL1000-IDU-R-E1 and WL1000-IDU-R-T1 can be used with ODU under release 1.700 and higher. • RW-7204-2000 can be used with ODU under release 1.790 and higher. There is no indication to the user when connecting them with releases prior to 1.790. • RW-7208-2000 and RW-7216-2000 can be used with ODU under release 1.8 and higher. There is an indication to the user when connecting them with releases prior to 1.8 that a valid IDU couldn't be detected. • RW7102-1000, RW-7204-2000, RW-7208-2000 and RW-7216-2000 are compatible with other IDUs, but the multiple TDM clocks capability is not supported. • In some cases of RW-7204-2000 mismatch and release prior to 1.795 the user indication is that the RW-7204-2000 are Ethernet only. • IDU-E revision 9 can be used only with release 1.9.30.

7 Limitations

	Issue Name	Description	Workaround
1.	Packet Loss Under Burst Traffic	In a burst traffic test, the system provides 40K bytes buffer size for frames larger than 500 bytes. For smaller frame sizes (64, 128 and 256 bytes), a lower buffer size is supported.	This case can be reproduced only in a lab using a traffic generator configured with specific traffic patterns
2.	Minor BER Degradation in TDM Service at High Modulation	Minor BER degradation (<10E-7) may occur in TDM services while using the highest modulations (48Mbps @ 20MHz channel bandwidth, 27Mbps @ 10MHz channel bandwidth, 13.5Mbps @ 5MHz channel bandwidth)	Use lower modulations
3.	Bridge Addresses	In scenarios of consecutive MAC address the bridge learns less than 1024 MAC addresses	None
4.	TCP Traffic Limitation Under Asymmetrical Ethernet	Full duplex TCP traffic is limited to the minimum between the uplink and downlink directions.	Establish multiple TCP sessions

	Issue Name	Description	Workaround
5.	Problematic Frequencies in bands 2.4/HP and 2.3/HP	In Max Tx power scenarios the link air interface may have high error level in the frequency range of: 2.322-2.337GHz	Lower the transmission power by 3 dB
6.	TDM round trip delay	At channel BW of 5 and 10MHz TDM round trip delay might be over 16ms	Reduce jitter buffer size

8 Known Issues

8.1 New in Release 1.9.30

	Issue Name	Description	Workaround
1.	SNMP Traps	In rare cases , under products of hardware revision 9, SNMP traps may not be generated to all defined trap destinations	Reduce number of trap destinations
2.	Over the Air backup	Over the air backup operation via RADWIN Manager fails, when MIR value is set below 256Kb	Increase MIR value before backup process
3.	Excessive traffic rate in Ring application	Under excessive traffic of small packet size of 64 bytes to -100 bytes, RPL may switch from idle to active mode	In order to avoid this scenario, the user should set the "Minimum time for failure detection" parameter to a value greater than 200 ms.
4.	Redundant traps under Ring application	In rare cases under a ring application, when resetting an RPL link, multiple traps of "RPL state changed to Active" are displayed in the RADWIN Manager, instead of a singe trap.	
5.	MIB Walk	MIB Walk fails in GSU due to General Error	
6.	IDU LAN ports Display	In case of Link with New IDU-E vs. old IDU-E or IDU-C only one out of two LAN ports recognized in the RADWIN Manager Note that second Ethernet port is active and working properly	
7.	Compatibility event	The label 'SWU recommended' is missing under a scenario when one site of the link is running with version 1.9.30 while the other site is running with older software. This issue is not service effective.	Its is recommended to upgrade both sites of the link to 1.9.30 software version

8.2 From previous releases

	Issue Name	Description	Workaround
1.	Telnet Disconnects	Telnet disconnects during software upgrade	Do not upgrade software during telnet session
2.	PM Related	Incorrect false integrity indication	Ignore the indication after the system is operational for more than 15 minutes
3.	Synchronization problem due to channel bandwidth changes	In rare cases Synchronization problems due to channel bandwidth changes from 5,10 and 20MHz	Reset the ODU
4.	Date and Time Accuracy	In case of HSS link down, time of day drift may occur. If the NTP server is configured there may be wrong values in the PM data.	Use NTP server to cancel the drift. There may be up to 2 seconds of redundant or missing data in the PM report.
5.	RSS Display Deviation	In extreme conditions RSS display deviation may occur in the following products: WL1000-ODU/F54/ETSI… WL1000-ODU-HE/F54/ETSI… WL1000-ODU-HE/F54/FCC/CMB… WL1000-ODU-HE/F54/IC/CMB…	No Effect on service
6.	Single Error Second	Single error second was observed in some rare cases during service change with RW-7204-2000	None
7.	Throughput Not Displayed	Throughput is not displayed in case of incompatible ODU release	Upgrade the ODU release
8.	Wrong Incompatibility Traps	Wrong incompatibility traps in one side of the link in case of ODU incompatibility	Upgrade the ODU release
9.	Redundant Traps	Redundant Ethernet connection and disconnection traps during VLAN setting on the managing computer	Ignore the redundant traps
10.	SES Problem	Several SES's appear when link mode is being changed from Hot Standby Primary/Secondary Active to Hot Standby Disabled	None
11.	E1 to T1 Switching Problem	Switching from E1 to T1 configuration or vice versa with connected external equipment causes to TDM data transfer problem	Disconnect and Reconnect the external equipment after configuration change
12.	TDM BERs after Link establishment	On a scenario of ODU power off (ODU only) in one site and entire power off of the opposite site while external TDM equipment is connected, consecutive TDM BERs occur after the Link establishment	Reset both sites
13.	Short RADWIN Manager Disconnection	Short RADWIN Manager disconnection (Device Unreachable) occurs after link synchronization when unreachable trap destination was defined	Remove all unreachable trap destinations
14.	TDM BERs Under TDM Service Change	Changing the number of TDM Trunks causes to several TDM BERs in all Trunks for several seconds	None

	Issue Name	Description	Workaround
15.	Asymmetric TCP/IP Traffic	Asymmetric TCP/IP traffic performance under single session and TDM service (test was done using iPerf application)	Run multiple TCP sessions or UDP
16.	Wrong Trap Text	Under MHS (1+1) configuration in case of primary Link disconnection a wrong Trap/Alarm text that describes the Secondary Link status may be displayed: "Secondary link is active", while the Link is actually inactive	Look at the Manager's monitor to verify the actual Link status
17.	Wrong TDM Line Status	Wrong TDM Line status is being displayed while the Line is actually in Normal state	Reset both ODUs
18.	ODU Port Configuration	The ODU port mode can be configured by MIB browser even when IDU is connected	Configure the ODU port via RADWIN Manager only
19.	ODU Reset	ODU reset under extreme interference on a specific frequency	Change the Link frequency
20.	TDM Wander problem	Wander output T1 failed in new IDU-C opposite an old IDU-C in one link	Use new IDU-C on both sides of the link
21.	MHS (1+1) Switch Over Time	Switch over from Secondary Link to Primary Link may take up to 90 msec instead of 50 msec	None
22.	Missing Trap	In Access products, when the Link distance is over 20 Km, a trap is generated only from one side of the Link	Install Access products under 20Km distance
23.	TDM BERs	TDM BERs may occur in old IDU-C revision, over the non-Master Clock Trunks when the Link is operating under RFP 'E'	Either use new revision of IDU-C or switch to other RFP if possible
24.	Windows 2000 Problem	The HSS configuration is disabled in the RADWIN Manager site configuration screen, under Windows 2000 OS	Use WinXP
25.	TDM BERs	In rare cases TDM BERs under the following configurations: 5/10MHz channel BW and RFP ‘E’.	Change Link configuration